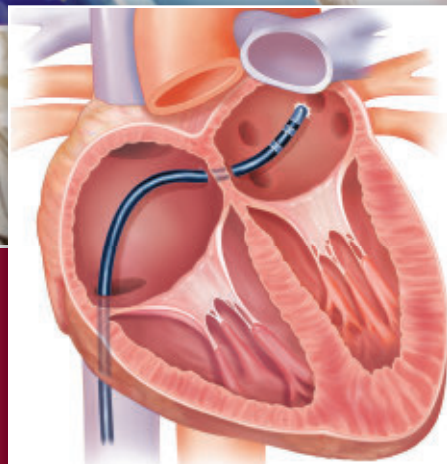


# UNDERSTANDING CATHETER ABLATION



Treating an Abnormal  
Heart Rhythm

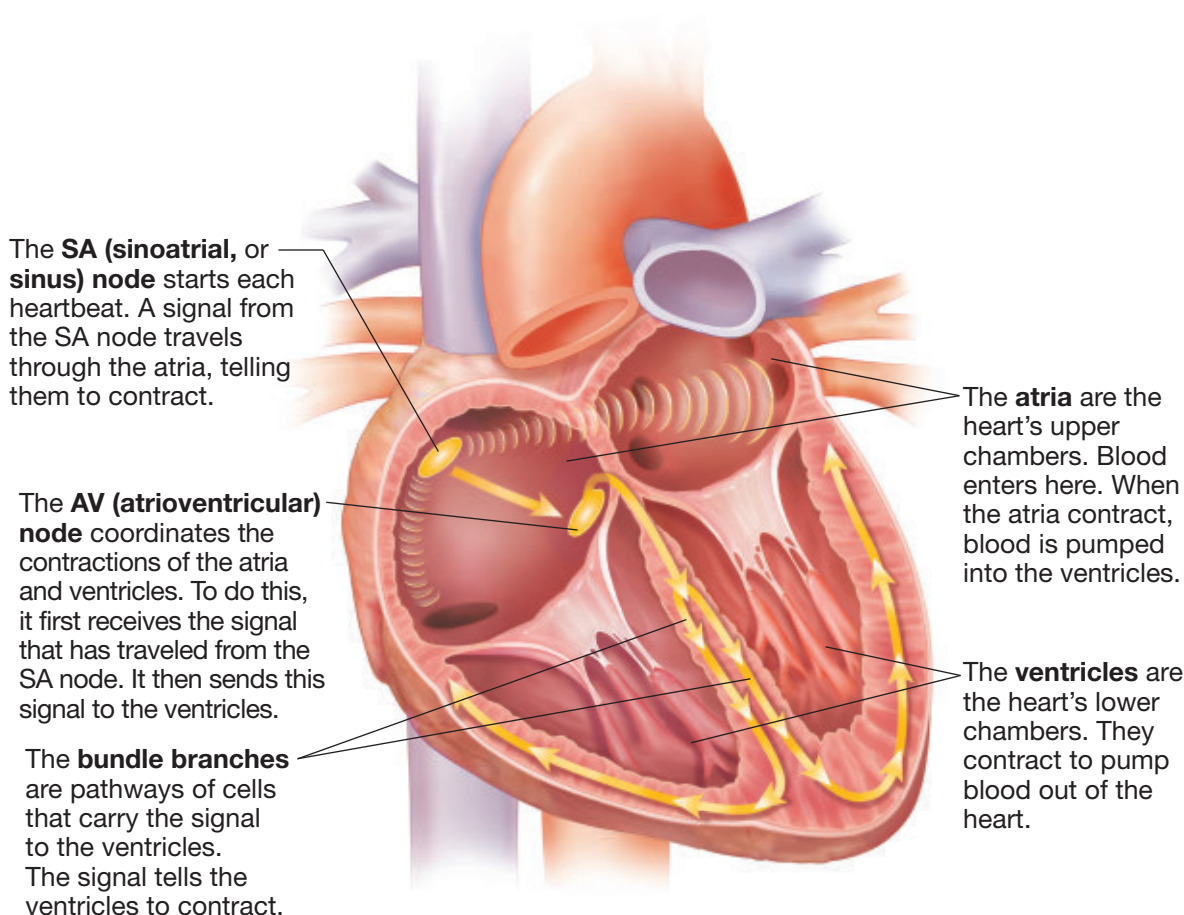


# Problems with Your Heart Rhythm

The heart beats at a certain speed and pattern. This is called the heart rhythm. It is controlled by special electrical cells in the heart. An **arrhythmia** is a problem with your heart rhythm. Arrhythmias are due to electrical cells that do not work as they should. Your provider has recommended a procedure called **catheter ablation** to treat an arrhythmia. This booklet will tell you more.

## A Normal Heart Rhythm

The heart's electrical system controls the speed and pattern of the heartbeat. Special electrical cells in the heart create these signals. During each heartbeat, the signals travel through the heart's chambers, telling the chambers when to contract (squeeze). If the system works correctly, the heart beats regularly at the correct pace.

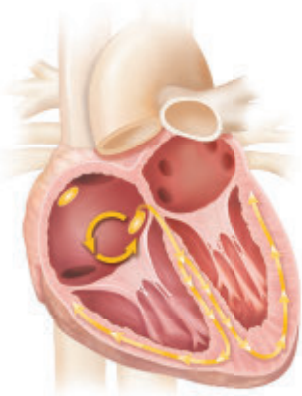




## Fast Heart Rhythms

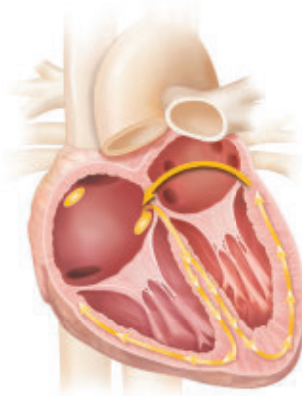
Problems with electrical signals can make the heart beat too fast. Some fast heart rhythms are caused by an abnormal **circuit** (signals going around and around in circles). Other fast heart rhythms occur when electrical cells send out extra signals. You may have one of these common arrhythmias.

### ❑ AV Nodal Reentrant Tachycardia (AVNRT)



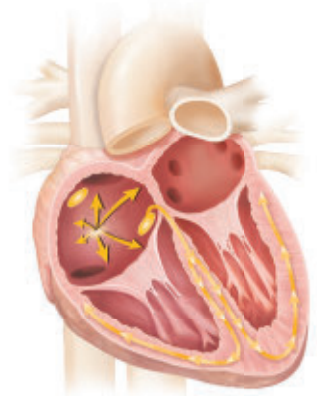
An abnormal circuit of electrical signals forms inside the AV node.

### ❑ Atrioventricular Reentrant Tachycardia (AVRT)



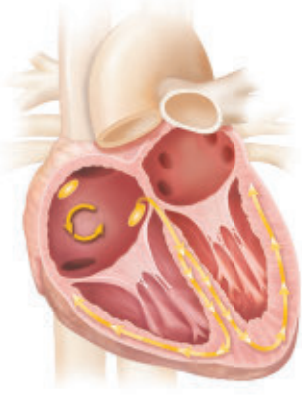
Extra signals can travel along an abnormal pathway between the atria and ventricles. This forms a problem circuit through the entire heart.

### ❑ Atrial Tachycardia



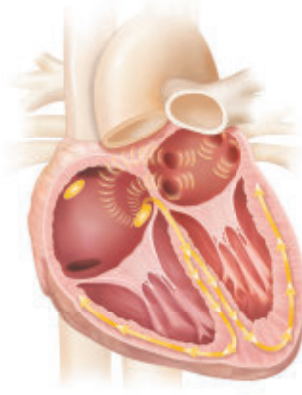
Abnormal cells in one of the atria send out rapid signals.

### ❑ Atrial Flutter



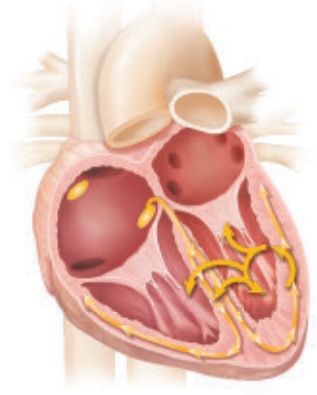
An abnormal circuit of electrical signals forms in one of the atria.

### ❑ Atrial Fibrillation



Many abnormal circuits of electrical signals form inside both atria.

### ❑ Ventricular Tachycardia



Abnormal cells in one of the ventricles send out rapid signals.

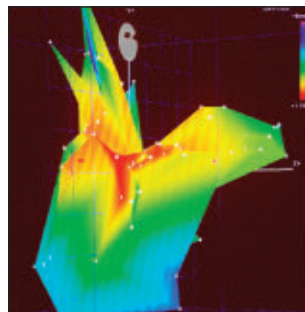


# About Catheter Ablation

**Catheter ablation is done by an electrophysiologist (specially trained heart provider). The procedure uses thin, flexible wires called **electrode catheters**. These are inserted into a blood vessel in your groin or neck. Then, the catheters are gently guided through blood vessels into the heart. The provider uses these catheters to find and ablate (destroy) problem cells.**

## The Heart's Signals Are Mapped

First, an **electrophysiology study (EPS)** is done to find the problem electrical signals. During the EPS, the arrhythmia is often induced (started). An electrical map of the heart is created. This shows the type of arrhythmia you have and where the problem is. Using the map as a guide, the provider can find the most effective area to ablate.

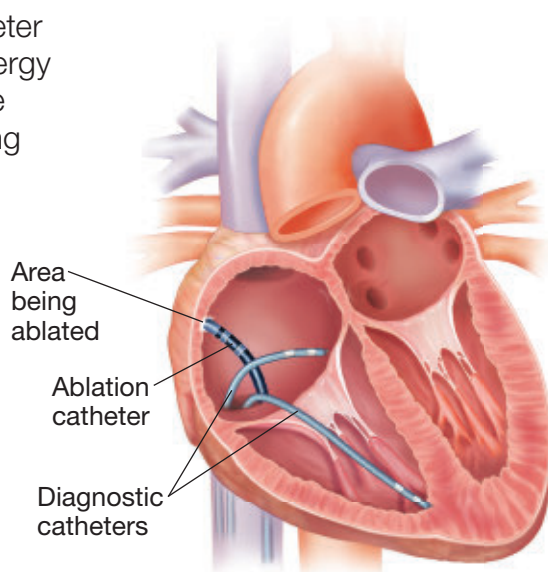


In this electrical map, the red area is where the arrhythmia starts. This is where ablation will be done.

## Problem Areas Are Destroyed

Once the EPS is done, an electrode catheter is moved to the area of problem cells. Energy is sent through the catheter to destroy the problem cells. One or more of the following may be ablated:

- An extra pathway of electrical cells.
- Abnormal tissue that's triggering a fast rhythm.
- Part of the AV node.
- All of the AV node. If this is done, a permanent pacemaker will often be implanted during the same procedure. This device takes over the AV node's job of coordinating contractions of the atria and ventricles.



## The Heart's Rhythm Is Tested Again

After ablating the problem cells, the provider tries to reintroduce (restart) your arrhythmia. If a fast rhythm can't be induced, the ablation is a success. But if a fast rhythm does start again, further ablation may be needed.

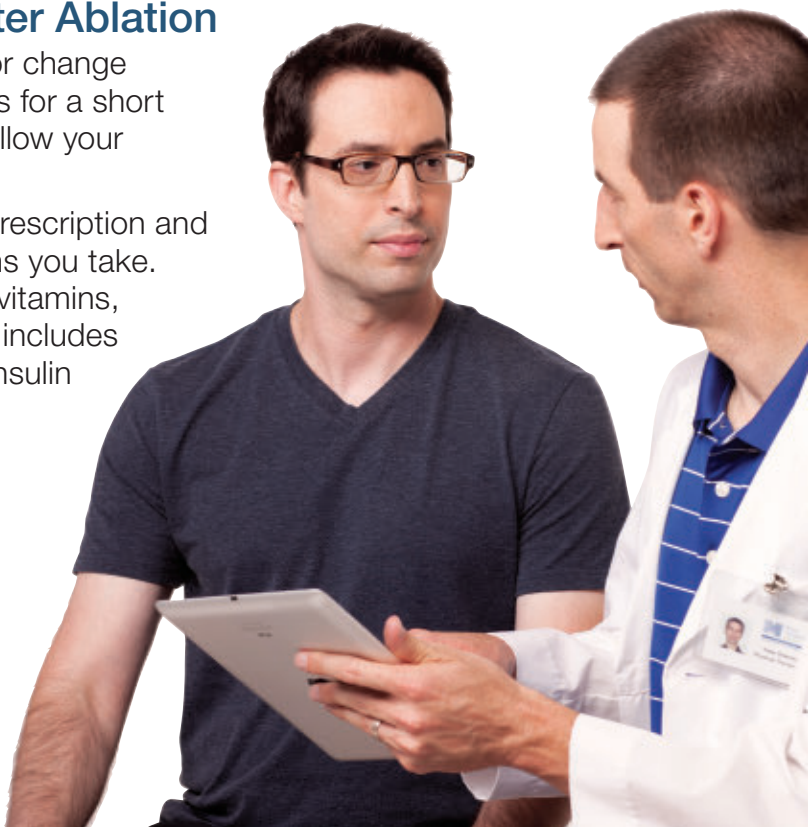
# Before the Procedure

**Before your catheter ablation, you will meet with the electrophysiologist. You will discuss the benefits and risks of catheter ablation and what you can expect from the procedure. If you have any questions or concerns, be sure to get them answered or addressed. Once the procedure is scheduled, follow all instructions for how to prepare for it.**

## To Prepare for Catheter Ablation

You will likely be told to stop or change your heart rhythm medications for a short time before the procedure. Follow your provider's instructions. Also:

- Tell your provider about all prescription and over-the-counter medications you take. This includes supplements, vitamins, and herbal remedies. It also includes daily medications, such as insulin or blood thinners. If you are allergic to any medications, tell your provider.
- Have any routine tests, such as blood tests, as recommended.
- Do not eat or drink anything for a time before the procedure, as instructed.



## Risks and Complications

*The risks of catheter ablation are fairly low compared to the benefits you receive.*

*Risks and possible complications can include:*

- Bleeding, bruising, or blood clots
- Infection at the insertion site
- Injury to the heart muscle, blood vessel, or heart valve
- Blood clots traveling to the lungs (pulmonary embolism)
- Blood clots traveling to the brain (stroke)
- New arrhythmias
- Heart block (requires a permanent pacemaker)
- Death (extremely rare)



# During the Procedure

**In most cases, catheter ablation is done in an electrophysiology (EP) lab. It often takes 2 to 4 hours, and sometimes longer. You'll receive medication to prevent pain. You may be drowsy, lightly asleep, or in a deep sleep. If you are awake and feel uncomfortable at any time during the procedure, tell the healthcare provider.**

## Getting Started

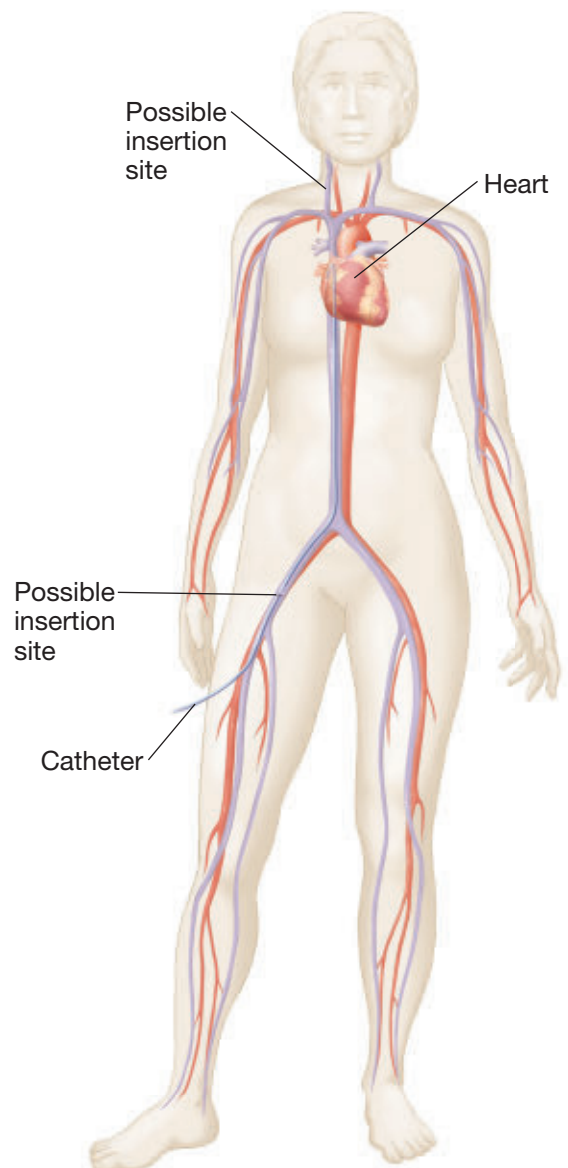
An IV (intravenous) line is started in your arm. Medications and fluids are provided through this IV. You are given medication to make you relaxed and drowsy or asleep during the procedure. Your body is draped with sheets. Only the area where the catheters will be inserted is exposed.

## Inserting the Catheters

The skin where the catheters will be inserted is numbed with a local anesthetic. Then a small needle is used to enter the vein or artery. The catheters are inserted and gently guided to the heart with the help of x-ray monitors. EPS and ablation are then done.

## Finishing Up

When the procedure is finished, the catheters are taken out of your body. You're then taken to a recovery area to rest. Pressure is applied to the insertion site to help it close. No stitches are needed.



# After the Procedure

**You may need to lie flat for 2 to 6 hours to be sure the insertion site has closed. During this time, you'll be monitored by a nurse. You may go home later that day. Or, you may stay in the hospital overnight.**

## Going Home

When it's time to go home, have an adult family member or friend drive you. The insertion site may be sore at first. Most people, though, can walk, climb stairs, and perform light activity soon after the procedure. You can most likely return to your full routine within a few days. But you may be told to avoid running, heavy lifting, and other strenuous activities for a time.

## Following Up

You'll have a follow-up visit to go over the results of your catheter ablation. Your provider will tell you if you can stop taking heart rhythm medications. In many cases, one ablation is enough to treat an arrhythmia. But sometimes the problem returns or another is found. If this happens, you may need a second ablation. Tell your healthcare provider if you have any new or returning symptoms.

## In the Next Few Weeks

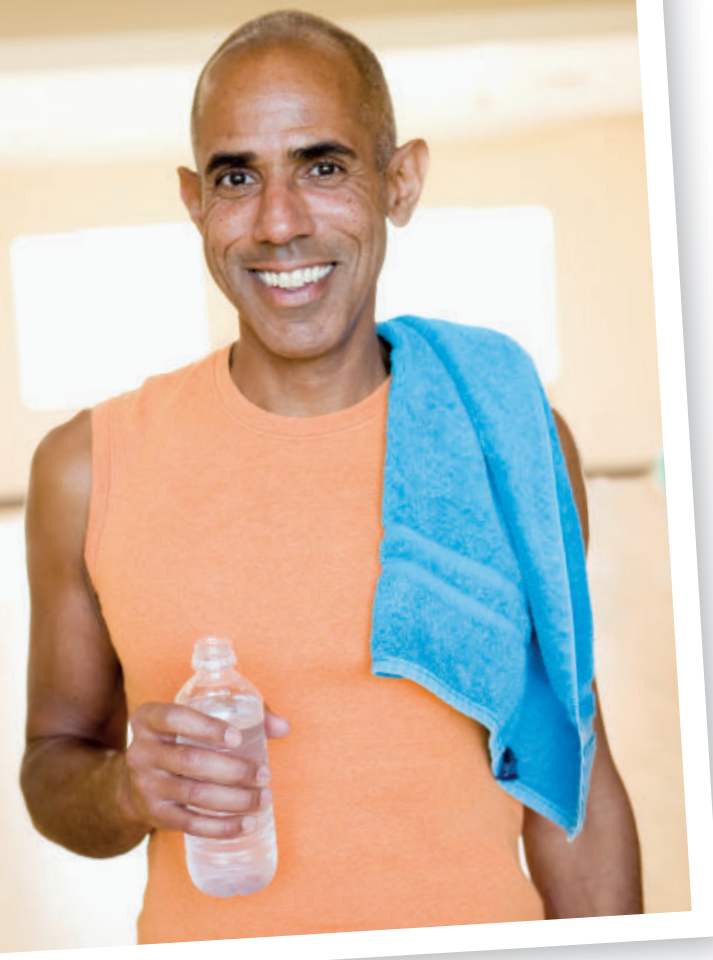
In the first few weeks after catheter ablation, you may feel as if your heart is skipping beats. Or, your heartbeat may feel faster than normal. You may also think that your heart rhythm problem is about to return. These sensations are normal and usually go away with time. Talk to your healthcare provider if you're concerned.

## When to Call Your Provider

*After your procedure, call your provider if you have:*

- Fever of 100.4°F (38°C) or higher, or as directed by your provider
- Bleeding or increased bruising or pain at the insertion site
- Shortness of breath or chest pain
- Coldness, swelling, or numbness near the insertion site
- A bruise or lump at the insertion site that is larger than a walnut
- Symptoms of your arrhythmia





## Work with Your Provider

Treating your arrhythmia can help you feel more confident about your health and your heart. Then you can focus on being active and enjoying life. As you consider your options, you and your provider can discuss what catheter ablation can do for you and weigh its benefits and risks. Be sure to get answers to any questions you have. By working with your provider and being involved in your care, you can help ensure that your needs are met.

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